Review of NARA Electronic Records Management (ERM) Guidance:

Introduction

1) The purpose of the Electronic Records Management (ERM) E-Gov initiative for which NARA is managing partner, is to provide a policy framework and guidance for electronic records management applicable government-wide. To accomplish this goal, NARA published a suite of advisory documents that taken together form the policy principles and structural support for ensuring a level of uniform reliability in both the Federal Government's 1) *management of Electronic records*; and 2) *the ability to transfer electronic records to NARA*.

2) The ERM initiative was divided into four subject or Issue Areas which were each led by a different federal agency:

   - Correspondence management and tracking (DOE)

   - Enterprise-wide ERM (EPA)

   - Electronic Information Management Standards (DOD)

   - Transfer of permanent e-records to NARA (NARA)

   Goals for the issue areas included:

   - Improving communications through documentation sharing and collaboration;

   - Providing information on the infrastructure needed to develop and implement ERM systems;

   - Providing guidance in managing records in compliance with statutory record management requirements; and

   - Addressing the transfer of permanent electronic records to NARA

3) The series of guidance documents produced under the Enterprise-wide ERM issue Area is aimed at helping agencies understand the technology and policy issues associated with procuring and deploying an enterprise-wide ERM system. These documents include in order of publication:

   - *Coordinating the Evaluation of Capital Planning and Investment Control (CPIC) Proposals for ERM Applications,* highlighting the steps for evaluation of CPIC proposals in order to acquire and implement an ERM system.

- *Electronic Records Management Guidance on Methodology for Determining Agency-unique Requirements,* offering a process for identifying potential ERM requirements that are not included in DOD 5015.2-STD (v.2)

- *Guidance for Evaluating Commercial Off—the-Shelf (COTS) Electronic Records Management Applications,* summarizes the EPA experience determining agency-wide Electronic Records and Document Management System (ERDMS) requirements and identifying COTS products that would best meet the needs of the agency.

- *Building and Effective ERM Governance Structure,* defines governance its purpose and function, how it fits within established governance structures, and its importance to the success of IT.

- *Guidance for Developing and Implementing an Enterprise-wide Electronic Records Management Proof of Concept Pilot,* presents "lessons learned" and experience gained in the development of proof of concept pilots for ERM.

Coordinating the Evaluation of CPIC Proposals for ERM Applications

SUMMARY

The purpose of the guidance is:

1. Assist staff in their efforts to effectively coordinate and control the acquisition and implementation of ERM capabilities enterprise-wide.

2. Provide three basic steps for evaluating CPIC proposals for ERM applications from the perspective of encouraging and enterprise-wide approach. The intended audience for the document includes federal agencies that have already made a decision to acquire and implement an ERM system.

3. Help Agency managers with the process of making funding decisions for enterprise-wide ERM systems while considering multiple CPIC proposals for systems with similar functions and requirements.

4. Provide a set of decision points to determine if office-specific ERM systems should be funded independently or integrated with an agency's enterprise-wide system.

5. Use by agencies in reviewing other CPIC proposals that may require ERM functionality.

ISSUES

The guidance document outlines three basic steps for evaluating CPIC proposals for enterprise ERM applications:

1. Step One **-** *Identify Projects with ERM components.* The purpose of this step is to identify CPIC proposals that require the purchase of ERM tools. This step involves having **Records Officials** review all CPIC proposals for ERM functionality to identify what overlaps with the proposed enterprise ERM system.

2. Step Two – *Evaluate Whether Separate Funding for Program-Specific ERM is Warranted.* In this step the agency needs to determine if the system has a compelling reason to be continued separately from an enterprise-wide ERM system.

3. Step Three – *Determine Project's Life Cycle Status and the Value of continuing or Ending Project.* The purpose of this step is to determine if the systems may have some value in continuing, to a certain degree, even when they may be duplicative of an agency ERM system. This step assists in answering questions of

funding. The main factor in the funding question is determining which ERM approaches, enterprise-wide or program-specific, provide the best solution to managing the electronic records in a way the effectively ensures accessibility and integrity throughout the life cycle of the records.

Electronic Records Management Guidance on Methodology for Determining Agency-unique Requirements

SUMMARY

This document provides additional guidance following the release of the *Design Criteria Standard for Electronic Records Management Applications, DOD 5015.2-STD,* by the Department of Defense (DOD). The DOD standard is a baseline and outlines the minimum functional requirements for ERM applications. In short, it specifies design criteria necessary for identifying, storing, and disposing of electronic records. However, it does not define how an agency manages these records or how an ERM program is to be implemented. The purpose of the standard was to specify mandatory design requirements that a commercial off-the-shelf (COTS) product must maintain before DOD could use it.
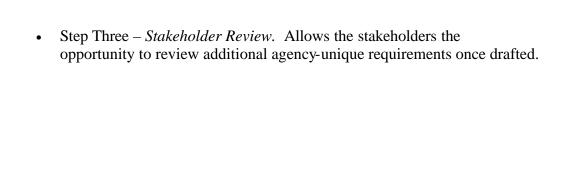
Though this standard has become the recommended design criteria standard for the rest of the federal government, it only provides a generic set of requirements for ERM applications. Thus, after reviewing the standard organization will find it necessary to determine if they have any additional requirements.

The purpose of this guidance is to:

1. Assist agencies with the managing and scope of the requirements analysis step of an enterprise-wide ERM acquisition project so that agencies can decide what products meet their business and information architecture needs.

2. Help agencies develop requirements that "support the agency's fully identified business processes, make the best use of its resources, harmonize current systems, and produce a system that provides tangible benefits to the organization and end users."

3. Provide a process for identifying potential ERM system requirements that were not included in the Design Criteria Standard for Electronic Records Management Applications, DOD 5015.2-STD (v.2). The reason for this is the need to incorporate additional, agency-unique requirements beyond those contained in the standard.

4. Be used as a "best practice" that agencies can adhere to when deciding to customize RMA software.

5. Discuss the methodology of gathering requirements at a high level so that each agency can apply it to their organization.

ISSUES

There are two phases which outline the process for determining additional requirements for ERM applications:

1. The first phase deals with identifying and gathering agency-specific requirements by examining project scope, existing electronic records systems, information technology architecture, and information policies.

   - Step One - *Determining Scope*, the goal of which is to gather basic information on what the system will and won't manage, and establish what end users can expect the system to accomplish. In determining scope the team must consider all record formats, stakeholders that may have potential requirements, and sensitive information the system will include.

   - Step Two – *Review Infrastructure/IT Architecture*, by identifying unique agency infrastructure or architecture that could result in unique requirements for the ERM system. ERM system must fit into existing infrastructure – review Network, security, desktop applications, and desktop configuration. Additionally, define if the system will be administered at the agency level or at a lower level.

   - Step Three – *Review Agency Records and Information Resources Management (IRM) Guidance and Directives,* because the ERM system must support any agency unique IRM policies in handling electronic or paper records. Items to review at this stage include: RM policies, IRM policies, Security policies (including those concerning classified information), File plans, and schedules.

   - Step Four – *Review Available Standards* which may also provide requirements, guidance or perspective on ERM systems.

2. In the second phase the list of requirements generated is analyzed to determine if they should be included in the final list of ERM system requirements. The steps in this phase include

   - Step One – *Review the Requirements,* according to a set list of questions that will determine whether or not they should be eliminated including questions on aspects such as functionality, clarity, business processes, and organizational goals.

   - Step Two – *Requirements classification.* In order to prioritize requirements, the functionality of each agency-unique requirement should be evaluated in terms of its necessity for the system to function, savings in resources and time, ease of use, the tools it provides for the records manager, auditing capabilities, and how it may reduce risk of information access.

- Step Three – *Stakeholder Review*. Allows the stakeholders the opportunity to review additional agency-unique requirements once drafted.

<u>Recommended Practice: Evaluating Commercial Off-the-Shelf (COTS) Electronic Records Management (ERM) Applications</u>

SUMMARY

This document summarizes the Environmental Protection Agency's (EPA) experience in identifying the COTS products that would best meet the agency's staff for both Electronic Document Management (EDM) and ERM functionality. In short it explains the steps taken by the EPA as it considered various COTS systems that would successfully meet the specific requirements for the agency's ERM initiative.

How much of the process outlined in this guidance Agencies choose to adopt for their ERM initiative will depend upon the following:

1. Agency size
2. Approach to technology & ERM
3. Existing technology infrastructure
4. IT personnel
5. Required skill sets to develop and implement and ERM strategy.

The purpose of this guidance is to:

1. Provide practical methods for agency officials in the selection of COTS products for ERM applications, and assist in effectively identifying and assessing ERM systems capable of managing the electronic records that an agency must maintain.
2. Be used as a case study for organizations as they examine agency requirements while identifying and evaluating ERM systems.
3. Assist agencies in developing criteria important to the selection of COTS products and a method for weighting these criteria.

ISSUES

1. The guidance describes the following steps for evaluating COTS systems in order to determine and assess products that will meet ERM requirements and perform effectively within an agency's given environment:

   - *Analyze existing requirements,* by beginning the COTS evaluation with an assessment of your agency's requirements for managing documents, records, and E-FOIA. Gather are all requirements and create a master table, organized into several categories with groupings of requirements that are common to different components of the system. For resources that are useful in completing this step see p. 5 of the ERM guidance.

   - *Develop a manageable set of high-level criteria,* by taking the requirements you selected in the first step and creating a scoring mechanism for weighting the criteria in order to rank the products selected

for evaluation. Both the mapping and combining of requirements in this stage will facilitate an expedited process for ranking.

- *Gather information about each product.* By now the agency should have a manageable set of high-level criteria, weighted to reflect the importance of functions, which the agency can use to evaluate ERM product solutions. In this step the agency needs to:

- *Evaluate COTS products against criteria and score each product,* by creating product profiles for each solution presenting all information by the categories the criteria have been organized, and using the technical information and numeric values to guide your scoring process for each criterion. Note that few products solutions will reach a high level in this method of scoring.

- *Determine how the top three COTS solutions match your agency's specific requirements,* by comparing and contrasting them against the criteria that was not emphasized in previous analyses. The criteria selected for this process should reflect the requirements your agency deemed the most valuable during the requirements assessments and criteria weighting, as well as additional criteria that will make the system easy to use and implement agency-wide.

- *Present analysis and recommendation to governance or decision making body,* considering both the content of your material and the presentation stressing the success of the product, experience with vendor, and ease of integrating the system.

2. The guidance also provides a section on lessons learned from the Requirements and Evaluations stages of selecting a COTS product for ERM solutions at EPA, and information on how other agencies have set about determining their ERM requirements.

- **"You can't do ERM if you are not doing RM,"** and all records schedules and file plans must be current before implementing an ERM system.

- **Strategy:** Understanding and improving workflow are critical in conceptualizing the full process of the COTS evaluation, and conducting detailed planning of the project's structure including scheduling, budgets, implementation, project controls.

- **Leadership:** An executive-level official backing the project is crucial to the success of ERM implementation. Additionally, the involvement of senior management and a cross-section of individuals throughout the agency including: records managers, users, IT, and management are

needed to establish a team that is capable of effectively executing the plan.

- **Organization:** Reviewing and improving existing business process prior to or during the preliminary stages of this process provides agencies with a comprehensive approach to implementing ERM solutions. Continuous communication throughout the project as well as the collaboration of teamwork is also a critical factor to the project's success.

- **Technology:** Development of a modular strategy for total solution that will meet the agency's business requirements for records and document management is the best approach for integrating all high-level functions rather than seeking a single perfect product.

Guidance for Building an Effective Enterprise-wide Electronic Records Management (ERM) Governance Structure

SUMMARY

This guidance defines IT governance, providing illustrations as to effective governance mechanisms and the benefits derived by agencies when employing them. ERM projects are ideal candidates for development and operation within a successful governance structure due to the critical issues of ownership and access. Governance is the set of organizational regulations and standards exercised by management to provide strategic direction, ensure objectives are achieved, risks are managed effectively, and resources are used responsibly.

The purpose of this document is to:

1. Define governance structure and its importance to the success of IT projects.

2. Outline the purpose and function of that governance, as well as how project-specific governance fits within the framework of other established governance structures and the risk to projects if it is absent.

3. Outline the roles and responsibilities of essential elements of governance, including leadership, accountability, and oversight, and address how these elements contribute to the success of IT.

4. Define effective government mechanisms that are used to organize the process of on-going leadership and oversight of ERM projects, delineate the degrees of authority that individuals and groups have in ERM project decisions.

ISSUES

1. An effective approach to ERM governance structure consists of three components:

   - *Executive Committee* charged with the strategic decisions for ERM. This committee establishes the plan, scope, and goals for the ERM project, and oversees the planning, implementation, operation, and management for ERM.

   - *Operational Committee* is responsible for operations including the development procedures for ERM. The committee is responsible for defining ERM for the agency from a business perspective, and its members understand the influence ERM has in the effective and efficient functioning of an agency. This committee also develops the ERM policy infrastructure, emphasizing business processes and workflow, and is

responsible for updating processes as they relate to changing document and *records management* needs.

- *Technical Committee* addresses all technical issues associated with the ERM initiative. This committee assesses the current technical environment and policies and solutions that enable ERM to function effectively. The members are responsible for day-to-day activities regarding *electronic records management* and monitoring the system and making recommendations towards enhancing the system.

2. Subcommittees, ad hoc groups, and work groups can be established as necessary to research and focus on particular issues associated with ERM. These groups will provide recommendations by bringing research and documentation to the appropriate body for review and approval. Membership in all committee should include a broad cross-section of representatives of the agency including staff at all levels of management, users, *records managers*, and technologists and all locations. Additionally it is important to engage stakeholders in this process and at all stages of the ERM planning.

3. Leadership, accountability, and oversight will be different in each committee and are essential for the successful implementation and continued use of ERM systems.

4. All governance structures for ERM should fit into the established IT governance structure. Using the governance structures of other IT projects as guides will aid the agency in developing the best structure for the ERM project.

Recommended Practice: Developing and Implementing an Enterprise-wide Electronic Records Management (ERM) Proof of Concept Pilot

SUMMARY

This guidance explains the importance of developing a proof of concept pilot to demonstrate the capabilities of ERM software in a small controlled environment. A pilot project is important for:

1. Providing a risk mitigation strategy for agencies planning to implement ERM.

2. Informing or resolving alternative analysis for an agency during the investment planning stage.

3. Determining appropriate software use and ease of configuration.

4. Providing hands-on experience for records managers and IT personnel, and users.

The purpose of this guidance is to:

1. Apply the principles and "best practices" of IT project management to a proof of concept pilot for ERM for determining whether the ERM solution should be implemented agency-wide.

2. Be used by agencies as a reference as they configure pilot project teams, develop work plans, and seek participants for an ERM pilot project.

3. Present lessons learned and experience gained in the development of a proof of concept pilots for ERM.

4. Provide insight into the steps necessary for a successful ERM pilot project.

ISSUES

To be a useful guide for full-scale implementation a pilot needs to be carefully designed and evaluated. Activities related to the project are divided into three phases or categories: preliminary, conduct of the pilot, and test and evaluation. Additionally there are several key elements necessary for a successful pilot, and the guidance provides recommendations towards this endeavor. For a list of resources on this topic see *Appendix: Resources for Conducting a Pilot Project (Recommended Practice: Developing and Implementing an Enterprise-wide Electronic Records Management (ERM) Proof of Concept Pilot, March 2006).*

1. *Preliminary Activities*:

   - Defining the purpose, goals, objectives, and the scope of the pilot, which are not the same as those established for the agency's ERM initiative.

   - Establish the success criteria for the pilot and measures for evaluating the outcomes. This should be done with input from stakeholders, technical staff, and records management staff, and users.
   - Outline the benefits for conducting a pilot and risks associated with not doing one.

   - Establish an administrative infrastructure to provide support and guidance for pilot activities.

   - *Scope issues* include choosing participants for the ERM pilot and the correct mix and amount of records to yield a sufficient number of records transactions to effectively test the function of the system and the benefits to the agency.

   - *Administrative Issues* relate to the selection of teams and development of work plans that document reporting structures and accountabilities for the tasks.

2. *Conduct of Pilot*

   - Evaluates the preliminary decisions and assumptions made regarding hardware and software performance as well as service by the technical staff to determine if these were accurate.

   - Develops and uses tools facilitating documentation, communication/knowledge transfer, and metadata processes.

3. *Test and Evaluation*

   - Assess hardware and software, system and database design, and procedures employed during the pilot. The procedures include training, scheduling, system management, and maintenance.

   - Test products in dissimilar locations (e.g., records versus IT) for functionality, usability, and resulting benefits of ERM.

   - Confirm requirements and expectations.

4. *Success and Results of ERM pilot*

- To be successful, an ERM pilot needs: support of management, adequate funding, and well-trained staff.

- A successful ERM project will result in a better trained staff when it comes to ***records management issues*** and the importance of ERM; improved technical, managerial, and production procedures; well developed implementation plan; modified cost estimates and realistic scheduling; support of management and users.

- Recommendations for conducting a successful ERM pilot project based on lessons learned during the ERM proof of concept pilot include:

    1) Develop a complete project definition

    2) Document and obtain approval for all user requirements

    3) Complete software design before start

    4) Test applications through the use of prototypes before finalizing software

    5) Fully develop all specifications

    6) Work closely with the system developer and work groups

    7) Identify all acceptance procedures

    8) Attend to details

    9) Allow plenty of extra time

    10) Study similar projects

Recommended Practice: Analysis of Lessons Learned for Enterprise-wide ERM Projects

SUMMARY

The implementation of an enterprise-wide system poses many challenges, but the benefits to the agency, its staff, and users far outweigh the difficulties faced by ERM project teams. Coordinated document, records, information, and knowledge management strategies will enable agencies "to adapt to the demands of an evolving business environment". The process requires thorough planning and a degree of flexibility on the part of agency staff in order to facilitate the transition as processes are modified to accommodate the new system.

This guidance analyzes the experience of managers involved in ERM initiatives, and summarizes the accumulated knowledge in order to promote successful implementation and identify obstacles that can impede the progress of ERM.

ISSUES

1. In this document each of the phases of ERM implementation from reviewing CPIC proposals to the execution of a proof of concept pilot are analyzed with respect to the "lessons learned" grouped into five categories:

   - *Organization***:** ERM solutions must support all the organizations records, including unique Information Resources Management policies and organizationally unique *Records Management Policies* that address electronic records.

   - *Leadership:* From earliest stages on it is necessary for the agency to acquire support from all levels of management. In this case, senior management support is particularly crucial.

   - *Technology:* An agency ERM system must fit within the existing infrastructure and the organization must be able to incorporate the ERM system into its enterprise architecture. Thus, it is necessary to identify all agency unique infrastructures that could result in unique requirements for the ERM system. Consulting ERM standards will be useful in this step.

   - *Training:* Training should be used as an opportunity to prepare the agency for the changes involved in implementing an ERM system. Also highlight risks and benefits of an ERM system during these stages.

2. In general project managers recommend that for a successful ERM project agencies should:

- Plan ERM projects thoroughly from initial stages of planning to agency-wide implementation.

- Secure the support of senior-management, and stakeholder buy-in by focusing on records intensive processes that are essential to agency mission.

- Appoint staff to the project team who possess IT skills and Information Management skills. Additionally at least one person on the team should possess strong communication skills to assist with the execution of a marketing and communication plan for ERM systems.

- Clarify timelines in advance and explain any reasons for not meeting deadlines.

- Ensure agency infrastructure leads the application and not the opposite. Even if an ERM system meets all the agency requirements, it should not be selected unless it can fit within the existing infrastructure, be incorporated into the enterprise architecture, and is consistent with the IT plan.

- When purchasing COTS select a solution that is easy to obtain, arrange, implement and use. Custom design is costly and time-consuming.

- Minimize the burden on the system user (e.g. employ templates).

- Incorporate ERM with other IT systems.

- Ensure pilot success before implementing the system agency-wide.